

(PCT Article 36 and Rule 70)

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/002685

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1, 2, 5-12 as originally filed/furnished
- pages* 3, 4 received by this Authority on 08.10.2005 with letter of 04.10.2005
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-17 received by this Authority on 08.10.2005 with letter of 04.10.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/7-7/7 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-17</u>	YES
	Claims	<u></u>	NO
Inventive step (IS)	Claims	<u>1-17</u>	YES
	Claims	<u></u>	NO
Industrial applicability (IA)	Claims	<u>1-17</u>	YES
	Claims	<u></u>	NO
2. Citations and explanations (Rule 70.7)			
1.1	<p>The present application relates to a method and a device for the thermal purification of a waste gas that contains organosilicon compounds. The waste gas is regeneratively preheated using a heat-retaining material contained in a regenerator, said heat-retaining material being at least in part a packing material. Oxidation and waste gas purification is consequent upon said preheating process. The claimed method is characterised in that the heat-retaining packing material is withdrawn, purified and then returned to the regenerator. In this way, the adhesions formed by the oxidation of the organosilicon compounds are removed and clogging of the heat-retaining material is eliminated. The claimed device is characterised by associated structural features.</p>		
1.2	<p>Document JP-A-2002061822 (D1) is considered to be the closest prior art. The claimed subject matter differs from D1 by virtue of the features of the characterising parts of the independent claims. The device according to D1 comprises a combustion</p> <p style="text-align: right;">/...</p>		

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

chamber equipped with a burner. By means of said burner, the temperature is kept permanently between 750°C and 810°C. In this way, the formation of amorphous clogging oxidation products is precluded and separate treatment of the heat-retaining material is therefore unnecessary.

Document US-A-3870474 (D2) discloses (see the passages cited in the search report) a regenerative thermal oxidation system for reducing nitrogen oxide emissions. The heat-retaining packing material that is in part clogged with soot and carbon is withdrawn from the regenerator and replaced with fresh or purified packing material. However, D2 contains nothing to indicate that the described system could be modified in order to treat waste gas containing organosilicon compounds.

Document US-A-4940567 (D3) discloses (see the passages cited in the search report) a regenerative catalytic reduction system for the reduction of nitrogen oxide emissions. The heat-retaining material is a catalytic packing material which circulates through the system. Ammonia is added. The deactivated catalytic particles are eliminated or purified and replaced with fresh and purified particles. As in document D2, there is nothing in D3 to indicate that the described system might be modified in order to treat a waste gas containing organosilicon compounds.

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	<p>1.3 Thus, the subject matter of independent claims 1 and 13 is novel over the prior art citations and not rendered obvious by said documents. The requirements of PCT Article 33(2) and (3) are satisfied. The same arguments also apply in respect of independent claim 17, in which the use of the device defined in claim 13 is claimed. Claim 17 therefore satisfies the requirements of PCT Article 33(2) and (3).</p> <p>2. Dependent claims 2-12 and 14-16 relate to special embodiments of the subject matter of claims 1 and 13 and therefore satisfy the requirements of PCT Article 33(2) and (3).</p> <p>3. The subject matter of all the claims is considered to be industrially applicable (PCT Article 33(4)).</p>

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Box No. VII **Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

1. The closest prior art (D1 and D2) has not
been acknowledged in the description (PCT
Rule 5.1(a)(ii)).